

CLAIMS

What is claimed is new and desired to be protected by letters patent is set forth in the appended claims:

1. An optical lens drill press comprising:
 - a) a drill press comprising:
 - i) a base member;
 - ii) an adjustable stanchion extending perpendicularly upward from said base;
 - iii) a drill for retaining a bit in the bottom portion thereof perpendicularly oriented towards said base member;
 - iv) means for retaining said drill extended from an upper portion of said stanchion and in parallel relation therewith; and
 - v) means for selectively lowering said drill to act upon a workpiece.

- b) a lower shift assembly slidably engaged with said base member in a manner to permit it to be selectively and precisely positioned along the y-axis of said base member and temporarily locked into that position;
- c) an upper shift assembly slidably engaged with said lower shift assembly in a manner to permit it to be selectively and precisely positioned along the x-axis of said base and temporarily locked into that position, said upper shift assembly including two vertical opposing sidewalls;
- d) a rocker assembly rotatably disposed between and secured to said sidewalls of said upper shift assembly having means for selectively and precisely being rotated along the y-axis and temporarily locked into that position; and
- e) at least one lateral oscillation assembly comprising:
 - i) a planar lateral oscillation table;
 - ii) means for retaining a workpiece above said lateral oscillation table; and
 - iii) means for selectively and precisely rotating said lateral

oscillation table along the x-axis and temporarily
securing it into that position.

2. An optical lens drill press as recited in claim 1, wherein said workpiece
is an optical lens.

3. An optical lens drill press as recited in claim 2, wherein said means for
retaining said optical lens is a lens holding assembly comprising:

- a) a padded lens pedestal disposed on said lateral oscillation table;
- b) a front support post and a rear support post disposed on opposite
sides of said lens pedestal;
- c) a transverse brace parallel with said lateral oscillation table and
suspended thereabove by the upper portions of said front
support post and said rear support post, said transverse brace
having a vertically disposed threaded recess positioned above
said lens pedestal; and
- d) a lens clamp comprising a lens clamp knob disposed above said
transverse brace, a lens clamp head disposed beneath said
transverse brace and a threaded shaft communicating between

said lens clamp knob and said lens clamp head and extending through said threaded recess of said transverse brace.

4. An optical lens drill press as recited in claim 3, wherein said optical lens is placed on said lens pedestal with the area to be worked disposed beyond the peripheral edge thereof and said lens clamp knob is rotated to lower said lens clamp head to sandwich said lens between said pedestal and said lens clamp head to prevent said lens from shifting while being worked.

5. An optical lens drill press as recited in claim 1, wherein said lower shift assembly further includes an adjustment dial for incrementally moving said lower shift assembly along the y-axis and securing it at that position until said adjustment dial is further acted upon.

6. An optical lens drill press as recited in claim 5, wherein said base member further includes a ruled scale for determining the position of said lower shift assembly on the y-axis thereof.

7. An optical lens drill press as recited in claim 5, wherein the area to be drilled is aligned with said drill bit by appropriately positioning said lower shift assembly along the y-axis.

8. An optical lens drill press as recited in claim 1, wherein said upper shift assembly further includes an adjustment dial for incrementally moving upper shift assembly along the x-axis and securing it at that position until said until said adjustment dial is further acted upon.

9. An optical lens drill press as recited in claim 8, wherein said upper shift assembly further includes a ruled scale for determining the position of said upper shift assembly on the x-axis relative to said lower shift assembly.

10. An optical lens drill press as recited in claim 9, wherein the area to be drilled is aligned with said drill bit by appropriately positioning said upper shift assembly along the x-axis.

11. An optical lens drill press as recited in claim 10, wherein the target point to be drilled is perpendicularly aligned with said drill bit by adjusting the rocker assembly along the y-axis

12. An optical lens drill press as recited in claim 10, wherein the target point to be drilled is perpendicularly aligned with said drill bit by adjusting the lateral oscillation assembly along the x-axis as need to compensate for the curvature of said lens.

13. An optical lens drill press as recited in claim 1, wherein said rocker assembly retains a pair of lateral oscillation assemblies side-by-side.

14. An optical lens drill press as recited in claim 1, wherein said drilling assembly further includes a pivoting armature connecting said drill to said stanchion.